

CLAIMS

What is claimed is:

1. A method for generating a desired alphanumeric character, comprising:
providing a plurality of mnemonic aids that represent a plurality of different alphanumeric characters, each aid being designed so that it can suggest to a person a respective combination of one or more zones, from a plurality of zones, wherein if the combination is contrasted with the remainder of said plurality of zones then the remainder resembles the desired character.
2. The method of claim 1 wherein said plurality of zones are arranged so that the periphery around them is the maximum extent of every graphic symbol that appears when a combination of one or more zones is contrasted.
3. The method of claim 1 wherein said plurality of zones form a matrix.
4. The method of claim 3 wherein the matrix has twelve zones arranged in four rows and three columns.
5. The method of claim 3 wherein the respective combination of zones has no more than two zones, and wherein the plurality of mnemonic aids represent all 26 letters of the English alphabet and 10 decimal numerals.
6. The method of claim 3 wherein each aid is depicted by a matrix of said plurality of zones that shows the respective combination.
7. The method of claim 1 further comprising visually contrasting a combination of one or more of said plurality of zones with unselected ones of said plurality of zones, as the combination is being selected by a person.
8. A method for generating alphanumeric characters, comprising:
providing a plurality of selection zones;

instructing a user to select a combination, of one or more of said plurality of selection zones, that represents the user's desired alphanumeric character; and

providing a mapping between said selected combination and the desired alphanumeric character, wherein the mapping is based on a) representing each character as a juxtaposition of some of a plurality of open and closed curves, the plurality of selection zones being fewer than the plurality of curves, b) creating a template containing all of the plurality of open and closed curves, and c) aligning the template with the plurality of selection zones.

9. The method of claim 8 further comprising:

enabling the user to select one of the selection zones in the combination, by one of a) depressing a respective push-button and b) touching a respective region in a touch-sensitive surface.

10. A method for textual communication, comprising:

forming words and phrases using some of a plurality of graphic symbols that represent an entire alphabet, wherein each graphic symbol visually suggests a separate letter of the alphabet and is made of one or more marks, in a receiving area, none of which form a closed shape.

11. The method of claim 10 wherein a word is formed by a user marking a separate receiving area for each graphic symbol that constitutes the word as if the user were writing the word on a sheet of paper.

12. The method of claim 11 wherein the user is using a writing instrument to mark a form sheet on which a plurality of separate receiving areas have been delineated.

13. A method for textual communication, comprising:

considering a receiving area that bears a combination of one or more marks as representing an alphanumeric character, wherein each mark has a given form, position and orientation, within the receiving area, that suggest a feature of the character through a complementary rather than direct relationship with that feature.

14. The method of claim 13 further comprising considering a plurality of said combinations as constituting a word, wherein each of said plurality of combinations is located in a separate receiving area, as if the word were written on a sheet of paper.

15. The method of claim 13 wherein the receiving area is rectangular and has upper and lower non-overlapping regions, and said one or marks are from the group consisting of straight lines and dots.

16. The method of claim 15 wherein a dot positioned in the lower region of the rectangle refers to the feature of a closed curve, as in the characters "a", "b", and "d".

17. The method of claim 15 wherein a dot positioned in the upper region of the rectangle refers to the feature of a closed curve, as in the characters "e", "g", "p" and "q".

18. The method of claim 15 wherein a vertical straight line positioned in the upper region refers to the feature of a curve opening upwards, as in the characters "M", "U", "V", "X", and "Y".

19. The method of claim 15 wherein a straight line that is positioned in the lower region to the right refers to the feature of a curve opening to the right, as in the character "e".

20. The method of claim 15 wherein a straight line that is positioned in the lower region to the left refers to the feature of a curve opening to the left, as in the character "g".

21. An article of manufacture comprising:
a machine-readable medium having data stored therein that, when accessed by a processor, maps each of a plurality of alphanumeric characters to a respective selection of one or more regions from a plurality of regions so that if the respective selection of regions were to be contrasted with the remainder of the plurality of regions, then said remainder would positively define a plurality of features of a respective one of the alphanumeric characters.

22. The article of manufacture of claim 21 wherein the data is designed to allow said respective selection to be made via touch-sensitive screen inputs.

23. The article of manufacture of claim 21 wherein the medium has further data that, when accessed by the processor, divides a display surface of a touch-sensitive screen device into a two-dimensional matrix of said plurality of regions, and allows said respective selection to be made via input events on the display surface.

24. The article of manufacture of claim 23 wherein the medium has further data that, when accessed by the processor, displays a graphic symbol on the display surface that is aligned with the two-dimensional matrix, wherein the graphic symbol represents an alphanumeric character that has been mapped to said respective selection, so that a user can immediately confirm whether her selection resulted in the alphanumeric character she had intended to be retrieved.

25. The article of manufacture of claim 24 wherein the data is to display the graphic symbol by contrasting the selected regions with the remainder of the plurality of regions in said matrix, so that the graphic symbol as displayed is substantially coextensive with the outside boundary of said matrix and at least a part of every contrast area that allows the symbol to be viewed falls within a corresponding region that has been selected.

26. The article of manufacture of claim 25 wherein the data is to display the graphic symbol using a visualization area of the display surface that has higher resolution than said matrix, so that the symbol more closely resembles the alphanumeric character.

27. The article of manufacture of claim 21 wherein the data is to treat the respective selection as one for which said remainder positively defines a closed plane curve located below a left opening plane curve, as in



which features belong to the character "a", the respective selection having a first selected region located in a lower half of an arrangement of said plurality of regions and a second selected region located to the left and above the first region in said arrangement.

28. The article of manufacture claim 21 wherein the data is to treat the respective selection as one for which said remainder positively defines a closed plane curve located above a right opening plane curve, as in



which features belong to the character "e", the respective selection having a first selected region located in a upper half of an arrangement of said plurality of regions and a second selected region located to the right and below the first region in said arrangement.

29. An electronic system comprising:

a touch-sensitive display screen;

logic that implements an association between each of a plurality of alphanumeric characters and a respective combination of one or more regions selected from a matrix of regions that have been defined on the display screen, so that if the respective combination were to be visually contrasted with the remainder of the matrix then said remainder would resemble one of the alphanumeric characters; and

a power source coupled to power the display screen and said logic.

30. The system of claim 29 wherein the regions of a given combination, that is associated with a desired character, are those which are suggested by one or more features of the desired character.

31. The system of claim 30 wherein the matrix is taller than it is wide, the desired character is "a" whose features include a closed plane curve located below a left-opening plane curve, as in



and there are two regions in the given combination associated with "a", the first region being located in a lower half of the matrix and the second region being located to the left and above the first region.

32. The system of claim 30 wherein the desired character is "p" whose features include a closed plane curve located above an upside-down "L", as in



and there are two regions in the given combination associated with "p", the first region being located in an upper half of the matrix, and the second region being located to the right and below the first region.

33. The system of claim 26 further comprising logic that is to control the touch-sensitive display screen so that the respective combination is visually contrasted with the remainder of the matrix as an operator selects the combination, to produce a sensation in the operator of drawing the desired character.

34. A computing device comprising:
a data entry user interface;
an input control instrument;
said data entry user interface comprising a character output display area and an input control panel area, said input control panel area including a region responsive to said input control instrument;
a microprocessor;
a data storage device in communication with and addressable by said microprocessor;
data defining a set of character input signals derived from the features of a system of stylized alphanumeric character glyphs, and data for forming visual representations of alphanumeric characters, being stored within said data storage device;
an input control matrix defined within said region of said input control panel area said input control matrix being switchable between a plurality of configurations, wherein each of a predetermined plurality of said configurations corresponds to one of said character input signals;

an input visualization area defined within said region of said input control panel area, the input visualization area and the input control matrix being positioned relative to each other so that one lies over the other with like parts coinciding;

said input visualization area comprising a plurality of sections, each of said sections being characterized by visually-contrasting first and second states, said input control matrix, in response to said input control instrument, to define an input signal describing a selected configuration of said input control matrix; and

said microprocessor to receive said input signal, interrogate said storage device for a corresponding alphanumeric character, to form a pictogram of a corresponding stylized alphanumeric character glyph on said input visualization area, aligned with the selected configuration, and to transmit an output signal for said corresponding alphanumeric character to said character output display area of said data entry user interface.

35. A device as defined in claim 34 wherein said input control instrument is a stylus.

36. A device as defined in claim 34 wherein said input control matrix comprises a two-dimensional array of cells.

37. A device as defined in claim 34 further characterized in that:
a) a glyph formation matrix is programmed into said device;
b) said glyph formation matrix defining a two-dimensional array of sections; and
c) said data defining a set of stylized alphanumeric character glyphs identifying preselected sections of said glyph formation matrix.

38. A method for inputting alphanumeric characters onto a data entry user interface, said method comprising:
a) providing a glyph formation matrix comprising a two-dimensional arrangement of regions in the data entry user interface for displaying a set of alphanumeric character glyphs;

- b) providing an input control matrix, comprising a two-dimensional arrangement of cells in the data entry user interface, being coextensive with and aligned with said glyph formation matrix;
- c) establishing a correspondence between a configuration of said input control matrix, defined by a combination of one or more selected cells within said input control matrix, and an alphanumeric character glyph;
- d) receiving a selected configuration of said input control matrix; then
- e) identifying a corresponding alphanumeric character; and then
- f) displaying an alphanumeric character glyph that corresponds to said selected configuration of said input control matrix, by contrasting one or more selected ones of said regions with said glyph formation matrix.

39. A method as defined in claim 38 wherein the configuration was selected by a user addressing at least one cell of said input control matrix by means of a stylus.

40. A method defined in claim 39 wherein the searching for the corresponding alphanumeric character further includes applying an input signal to a microprocessor defining said selected input control matrix configuration; then

- b) interrogating a data storage device for an alphanumeric character corresponding to said selected input control matrix configuration; then
- c) recalling data from a data storage device defining preselected regions of said glyph formation matrix for representing said corresponding alphanumeric character; and then
- d) providing said data in an output signal to a input visualization area of said data entry user interface.

41. A method comprising:
providing a plurality of zones; and
contrasting a combination of one or more of the plurality of zones with a remainder of the plurality of zones, the combination having been selected by a user to represent a desired alphanumeric character, wherein the plurality of zones and the combination are such that, when contrasted, the remainder resembles the desired character.

42. A method comprising:
providing a plurality of zones; and
contrasting a combination of one or more of the plurality of zones with
a remainder of the plurality of zones, the combination having been selected by
a user to represent a desired alphanumeric character, wherein the plurality of
zones and the combination are such that the remainder forms one or more
positive features of the desired character.